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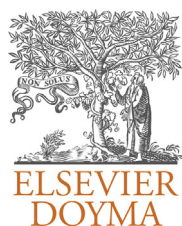
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ARTÍCULO ESPECIAL

Do family physicians need more payment for working better? Financial incentives in primary care

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médica;
Pago de incentivos;
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Abstract

Introduction: Financial incentives are widely used in health services to improve the quality of care or to reach some specific targets. Pay for performance systems were also introduced in the primary health care systems of many European countries.

Objective: Our study aims to describe and compare recent existing primary care indicators and related financing in European countries.

Methods: Literature search was performed and questionnaires were sent to primary care experts of different countries within the European General Practice Research Network.

Results: Ten countries have published primary care quality indicators (QI) associated with financial incentives. The number of QI varies from 1 to 134 and can modify the finances of physicians with up to 25% of their total income.

Conclusions: The implementations of these schemes should be critically evaluated with continuous monitoring at national or regional level; comparison is required between targets and their achievements, health gains and use of resources as well.

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¿Son necesarios los incentivos para trabajar mejor? Incentivos económicos en atención primaria

Resumen

Introducción: En muchos países europeos se aplican en atención primaria diferentes programas de pago de incentivos en función de objetivos alcanzados.

Objetivo: El objetivo de nuestro estudio es describir y comparar los indicadores más recientes utilizados en estos programas.

Métodos: Se realiza una revisión bibliográfica sistemática recogiendo las principales publicaciones sobre el tema. De forma complementaria se remite un cuestionario a diferentes expertos en atención primaria de diferentes países de la red 'European General Practice Research Network'.

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Resultados: Diez países tienen publicados sus indicadores de calidad (IDC) asociados a los incentivos económicos. El número de indicadores varía entre 1 y 134. En 8 países los IDC y los incentivos están incluidos en el salario mensual del médico, suponiendo entre el 1 y el 25% del mismo.

Conclusiones: Los IDC se basan fundamentalmente en el registro de determinadas variables tanto por el médico como por el equipo directivo, aunque la validez de los mismos puede variar según la fuente de datos utilizada. Los programas se monitorizan de forma continua a nivel nacional o regional, de acuerdo con cada sistema de atención sanitaria y los recursos disponibles.

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Introduction

Although medicine is a natural science it is very similar to the arts. Both are focusing on human beings and therefore it is hard to be characterized with numbers only. Measurement usually needs numbers, but how could be the level of physicians' work measured? Why could it be considered as good in scientific or practical point of view? How could it be estimated by the patients or by other health workers? Is it based on the knowledge, experiences, circumstances, available resources or on other methods?

There has been an extreme, unpredictable growth in the biomedical sciences in the previous decades. Medical knowledge is continuously changing, developing and thereafter getting out of date early.

Humans are examined, diagnosed and treated by humans. How could the doctors be motivated for better work, performing more efficient and effective treatments and operations? What are the best factors for motivation? Possible answers could be: satisfied patients, health gain, cost reduction in health care, professional success and/or financial incentives.

The quality of care plays an important role in health services researches worldwide for decades. But it is difficult to define and to measure. Quality has different approaches from qualitative or quantitative techniques.

The quality of care can be improved by continuous training program, using the Evidence Based Medicine (EBM) or the creation and of clinical guidelines and their application in everyday practice. Assessing and evaluation plays a pivotal role in the objective assessment and can improve quality.¹ The most commonly used quantitative measurement tools are the quality indicators (QI).² The quality indicators were initially used for assessment of the quality of hospital care. However, a significant proportion of the doctor-patient encounters take place in primary care, so there was a need for the development, identification and application of primary care indicators. The strategies for the introduction of quality indicators are not effective without understanding the factors required verify the history of its development without transmission their use between settings and countries.³

"Pay for performance" was a new strategy regarding contracts between doctors and health systems (initially in Australia, UK and United States). Providers under this arrangement were rewarded for meeting pre-established

targets for delivery of healthcare services. Also known as "P4P" or "value-based purchasing," this payment model rewards physicians, hospitals, medical groups, and other healthcare providers for meeting certain performance measures for quality and efficiency. The American Medical Association (AMA) has published principles for pay-for-performance programs, with emphasis on voluntary participation, data accuracy, positive incentives and fostering the doctor-patient relationship, and detailed guidelines for designing and implementing these programs.⁴

The first United Kingdom (UK) experiment in pay-for-performance (P4P) was the introduction of financial incentives to achieve targets for childhood immunisation and cervical cytology. These incentives were associated with a substantial rise in the achievements in these clinical areas, especially among previously low performing practices. The best known pay-for-performance system, the QOF (Quality and Outcomes Framework) was introduced as part of a new general Medical Service (GMS) contract for primary care in the UK in 2004 (Table 1).⁵

This type of motivation become more and more accepted and recognized by GPs, health authorities and professional bodies. In the past decades different pay for performance programs were introduced in several countries worldwide. Also in many European countries different financial incentive schemes were implemented.⁶ The European Community funded PHAMEU (Primary Health Care Activity Monitor for Europe) project developed indicators for comparison of primary health care systems in different countries (structure-process-outcome indicators), these measurable international indicators were used to monitor the quality of primary care in 31 European countries.⁷ EUprimecare project was funded by the European Commission's 7th Framework Programme used research methods to describe specific primary care organisational models in Europe and studied the possible compromise between quality and costs in each model. One of the main objectives of the study was development of specific clinical and non-clinical indicators.⁸

We aimed to find those European countries where some financial incentives are linked to quality indicators.

Method

There were two main sources of data: literature review and a questionnaire.

Table 1 Domains from the Original Quality and Outcomes Framework (QOF) (2004-2006).⁵

Domain	Indicators /areas	Diseases / Conditions	Target points (pt) / % of total payment
Clinical	76 indicators in 11 areas	Coronary heart disease, left ventricular dysfunction, stroke and transient ischaemic attack, hypertension, diabetes mellitus, chronic obstructive pulmonary disease, epilepsy, hypothyroidism, cancer, mental health and asthma.	550 pt / 52.4%
Public health	56 indicators in 5 areas	Record and information, patient communication, education and training, medicines managements, clinical and practice management.	184 pt / 17.5%
Patient experience	4 indicators in 2 areas	Patient survey and consultation length.	100 pt / 9.5%
Additional services	10 indicators in 4 areas	Cervical screening, child health surveillance, maternity services and contraceptive services.	36 pt / 3.4%
Depth of quality measure		A holistic care payment measures achievement across the clinical domain	100 pt / 9.5%

The literature search was performed with relevant keywords. We used the following search terms: quality, indicator, quality indicator, quality of care, healthcare quality indicator

AND financial incentive, pay for performance, incentive, incentive reimbursements

AND primary care, primary health care, general practice, family practice, family medicine general practitioner, family physician AND Europe, European, European Union.

Two researchers (IR, LRK) performed independent search. Different databases (Medline- PubMed, Embase, Cochrane Library, Web of science, Google Scholar) were searched for publications in English from 2000 to December 2012.

For the grey or not published literature we used the Google and Google Scholar search engines as well. Besides the above-mentioned sources we also searched the English version of governmental (where available), scientific sites to find other relevant information.

An informative *questionnaire* was developed (see Appendix) and sent to members of the European General Practice Research Network (<http://www.egprn.org>). Responses of at least 2 members of each country were expected.

Results

Fifty seven potentially relevant articles were found and abstracts retrieved. After eliminating the publications outside Europe and the duplicates (n = 29), 28 articles remained for further analysis.

Most articles were published about the QOF in United Kingdom.^{5,9–13} Literature research resulted only a few articles (n = 11) from other European countries, where both the financial incentives and quality indicators were described or investigated. Relevant papers were found about the quality indicator system of Spain¹⁴, Lithuania.¹⁵ In some papers experimental or theoretical results were published.^{16–18} Due to the limited length of this paper only the most relevant articles are in the reference list.

Questionnaires were sent via email to 44 primary care experts, 30 of them replied (68%). The summary of information we recollected and presented in the Table 2.

Ten countries were found and listed where primary care quality indicators are used and combined with financial incentives. The number of quality indicators varies from 1 to 134, the highest in the UK, the lowest in Italy. In 8 countries QI can influence the finances/salary of family physicians with a bonus of 1-25% of their total income. Besides the nationwide systems, there were local experiments and different regional systems mentioned in the Netherlands and in Italy, respectively.

Discussion

Over the last decades improving quality of care in general practice got an extensive focus.¹⁹ There were different health care system reforms, policy initiatives to improve the quality and strengthen primary care systems in many European countries.^{6–8,14,19} Many of quality improvement initiatives involve the introduction of indicators, and there attempts to enhance the quality in general practice through financial rewards based on fulfilment of indicators.^{12,19}

Table 2 European countries with primary care Quality Indicators (QI) related to payment.

Country	Year of introduction	Number of QI	Main fields of QI	QI related increase of income [in %] or EUR (approximately)
UK	2004	134	Clinical services, organisational, patient's experience, additional services	25%
SPAIN	2006	66	Indicators for GPs, nurses, odontology, paediatrics, social workers	1-2%
PORTUGAL	2006	40	Access to care, CV risk, diabetes, maternity services, paediatric care	10%
ESTONIA	2006	60	Quality bonus system: prevention, follow up, comprehensive care	6%
HUNGARY	2009	15 (adult), 6 (paediatric)	Prevention, screening activity, Hypertension, lipids, coronary heart diseases, diabetes, referrals,	5%
LATVIA	2010	21	Prevention, chronic disease management(e.g. diabetes, hypertension), ambulance visits	5%
ITALY*	2010	1	Diabetes, *(different in 20 regions)	< 1%
NETHER-LANDS	2010	17-20	Diabetes, COPD	7% (local experiment)
LITHUANIA	2011	22	Bonus payment: population care coverage, prevention, hospitalization, chronic diseases	9%
SLOVENIA	2011	20	Prevention, COPD, asthma, diabetes, hypertension	10%

Although we got more and more experience and results about the existing quality indicator and P4P systems, there are still a lot of questions, further evaluation and research is required to compare them properly and find the appropriate answer to the questions.

Are quality indicators needed for a better primary care? There are differences between the European countries, influenced by the health politics and priorities of the governments, by national traditions, available resources, the patients' expectations and the situation of primary care. The role of primary care is also different in each country. Primary care providers have more responsibilities and tasks with more emphasized gatekeeper functions (in the UK, Spain, Netherlands and Denmark) meanwhile in other countries it is only symbolic (France, Hungary, Italy). Correctly established and organized gatekeeper function can reduce the numbers of referrals and decrease hospitalization rates among patients with chronic conditions resulted in lower health care expenditures.^{13,19–21}

What indicators? The selection and definition of indicators is not easy; they should be based on real data and should be independent from the health care providers, who might be manipulating the results in order to increase their

income. Obviously, the choice of indicators could be influenced by several factors: the treatment protocol of the disease, the measurable biological parameters, prescription of medications and all the factors, which could be followed easily from the documentation and analysis of the patient's pathways within health care system. Depending on the source, validity of data may therefore vary substantially within electronic medical record system (EMR) since some items such as laboratory values are recorded automatically, whereas the validity of clinical information mainly depends on how physicians and their staff record the respective variables in the EMR.^{19–21}

The quality of the incentivised fields might improve; the non-incentivised activities could be neglected.

The valid and reliable data are not dispensable for quality initiatives, health service research and health policy decisions; however such data, originally from primary care setting are lacking in most countries.^{16,17}

How many indicators? If there are a few indicators, they can represent only certain aspects of the primary care providers' work. The implementation of too many indicators can lead to increased bureaucracy and box ticking instead of spending time with patients. There was 1 indicator in

Italy (the lowest) and 134 indicators in the UK (the highest) among the European countries in 2012⁵. In the UK, where there are the most indicators, there are opinions, that the indicator system should be simplified to decrease the GPs administrative workload.^{12,21,22}

How much financial incentive should be given? The financial incentives are determined and influenced by the employment form of primary care physicians/general practitioners; there are self-employed, contracted etc. doctors, with 2 main types of finances (capitation and fee for service). P4P schemes have become increasingly popular innovations in primary care and have generated questions about their effect on improving quality of care, although in some countries were not linked to QIs. There is no sufficient evidence that contradicts or supports the quality improvement effect of financial incentives.¹⁹ The effectiveness of P4P is inconclusive, though some reviews reported significant effects. A participatory P4P program might stimulate quality improvement in clinical care and improve patient experiences with GP's functioning and the organization of care. P4P schemes need to take more account of broader definitions of quality, as whilst they can have a positive impact on incentivised clinical processes, it is not clear that this translates into improving the experience and outcome of care.¹⁴ Too low incentives are not likely to be effective, too high incentives can cause unintended consequences (e.g. data manipulation, "gaming"/cheating). Our results showed bonus between 1-25% of the total income of the practice in Europe. There are different opinions, no exact, universal percentage can be established in different countries, but an increase of at least 5-10% could be appropriate.^{11,16,17,22-24}

Who should decide what to measure? In some nations P4P/QI system implementation was a governmental initiative (e.g. Hungary), in others it was a result of negotiation between the employers, policy makers, health providers and medical associations (e.g. UK), or it could be more "bottom-up" procedure, involving the target users (e.g. The Netherlands).^{5,9,10,16}

The development of indicators and financial initiative system should be based on broad political and professional consensus. As there are lots of questions and different answers, further research is needed to establish the most effective quality improvement methods in each country.

Limitations

Obviously there are some limitations of this evaluation:

- it is cross sectional study and presents only the actual financial practices of the European countries at the end of 2012,
- although governmental homepages predict many planned, QI-related financial changes in some countries, they have not yet been introduced,
- we did not perform detailed comparison of QI-s only their implementations are presented.
- there are differences in financing in these countries, depending on the economic situation and priorities of primary care. This comparison would require more focus on cost-effectiveness and other economic issues.

Conclusions

The quality indicators with financial incentives could be useful tools to improve the quality of primary care and services, if we keep the holistic approach of patients' care and use QI with other quality improvement methods.

The adequate number and fields of indicators and the extent of the related financial incentives could be essential to develop efficient QI and P4P systems. It is also important to take into account the characteristics of the national primary care systems.

Although majority of doctors in the primary care work as a professional but most of them believe that financial motivation is important. All of the achievements of these schemes should be evaluated at national or regional level, according to the health care system and available resources with continuous monitoring. This short and perhaps not comprehensive outlook for other European P4P systems can facilitate the thinking of GPs, evaluating and improving their daily work.

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Authors declare no conflict of interest.

Personal contribution:

LRK-study design, literature search, correspondence with questionnaires, text writing.

DOB- literature search, text writing

IR- study design, literature search, text writing, final text editing.

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Appendix A. Questionnaire. Primary care quality indicators (QI) in European countries.

The country where you are working:

The QI system was introduced in (date):

How many quality indicators are there in your country?

Are QI integrated in the computer software you use? (yes/no)

Is there a direct feedback / real time warning about the QI during the doctor-patient consultation or you get your monthly QI report after a certain time? (yes/no)

Does QI modify your income? (yes/no)

How many (%) of your income is based on QI?

What are the main groups /subgroups of QI?

Where can I find more information about Quality Indicators in your country?

Please specify available (governmental, insurance) homepage.

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